BEVERLY AND KAMINURIAK CARIBOU

MONITORING AND LAND USE CONTROLS

1988

Northwest Territories Renewable Resources

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BEVERLY AND KAMINURIAK CARIBOU
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GOVERNMENT OF THE NORTHWEST TERRITORIES

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ABSTRACT

The timing and pattern of Beverly and Kaminuriak caribou movements, in relation to the Caribou Protection Areas, were monitored from 15 May to 15 July 1988. Information and data collected were used to make recommendations to Indian and Northern Affairs Canada in order to facilitate the enforcement of the Caribou Protection Measures.

In late May, Beverly caribou migrated into the Beverly Caribou Protection Area via the Thelon Game Sanctuary. At calving (12 June), the highest density of calving cow caribou was northwest of Sand Lake. Lower densities were located southwest of this high density zone and occupied a large area of the Thelon Game Sanctuary. No information was collected on post-calving movements.

Kaminuriak caribou migrated north past Eskimo Point in mid-March and northeast past Maguse Lake during May. On 12 June, the highest density of calving cow caribou was centred around Blakely Lake with lower densities extending from Duffy Lake to Kaminak Lake. From calving until late June, cow and calf caribou converged upon the area between MacQuoid Lake and Banks Lake. By 1 July caribou were migrating south to Happotiyik Lake and then southeast to the Hudson Bay coast. Five days later caribou had split into northwesterly and southerly movements and most were still in the protection area.

There were no active land use sites within or adjacent to the Beverly Caribou Protection Area between 15 May and 15 July. There were nine (9) active land use sites within and adjacent to the Kaminuriak Caribou Protection Area between 15 May and 15 July.

Land use sites under restricted operations were:

1) Borealis Exploration Ltd. (N87D797) from 1 July to 15 July,
2) Sunmist Energy (N87C690) from 16 May to 7 June,
3) NPR Mineral (N87C666) from 15 May to 14 July,
4) Geological Survey of Canada (N88N930) from 10 July to 15 July,
5) INCO (N87C732) from 9 July to 14 July.
6) Placer Dome (N88N935) requested and received a release on 4 July.

Utah Mines (N88C908), Comaplex Mineral (N88J944), and Dejours Mines (N88C917) were unaffected by caribou and operated throughout the protection period.

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INTRODUCTION

In 1978, Indian and Northern Affairs Canada (INAC) implemented the Caribou Protection Measures (Appendix A) in order to minimize the interaction of human activities on Kaminuriak and Beverly cow and cow/calf segments of the herds (**Rangifer tarandus groenlandicus**). The protection measures specify areas where land use permit holders must get special federal government permission to work between 15 May and 15 July. Historically, this is the period of time when these areas are used by cow caribou just before, during and immediately after calving; an interval when caribou are deemed to be highly susceptible to disturbance.

The caribou monitoring program was implemented in order to facilitate the enforcement of the Caribou Protection Measures. Land use permit holders may apply to INAC for a release to work in the protection areas between 15 May and 15 July. The Caribou Monitor collects information and data on the movements and distribution of caribou, especially cow and later cow and calf caribou, reporting observations and making recommendations to the INAC District Manager in Rankin Inlet. A significant number of caribou has been defined as 1,000 or more caribou of any age or sex occupying an area of 500 square kilometres, where 1,000 may mean 500 cows and 500 calves (Darby and Williams 1979). Greater concern is directed towards cow and calf caribou as opposed to bull

and yearling caribou. Release requests are deferred if a significant number of cow or cow and calf caribou could potentially be affected by operations at the land use site.

This year's program continues the work done in previous years by Darby (1979), Darby (1980), Cooper (1981), Clement (1982), Clement (1983), Bradley and Gates (1984), Bradley (1985), Duquette (1985), Liepins (1986) and Ogilvie (1987). Mychasiw (1984) reviewed the first five years of the caribou monitoring program.

The protection area boundaries are subject to annual review. For 1988, approximately 1,000 square kilometres were added to the eastern coastal portion and approximately 2,500 square kilometres were deleted from the western portion of the existing Kaminuriak Caribou Protection Area. Approximately 600 square kilometres were added to the southern portion of the existing Beverly Caribou Protection Area.

This report contains information collected during flights between 15 May and 15 July 1988. Other sources of information were GNWT charter flights and INAC inspection flights accompanied by the Caribou Monitor, Government of the Northwest Territories (GNWT) Kaminuriak caribou census project, GNWT Beverly caribou census project and verbal reports of caribou sightings by various people

in the field. Opportunistic discoveries of collared caribou were also recorded. In addition, this report contains an account of land use activities within and adjacent to the protection areas.

METHODS

In 1988, caribou monitoring flights were conducted from 16 May to 14 July over the caribou protection areas and adjacent land (Figure 1).

All caribou monitoring flights were conducted in a modified Beech-18 (Tradewinds). This aircraft cruised at a speed of 300 kilometres per hour and was equipped with an Omega navigation system which was particularly helpful during spring when landmarks were covered by snow and ice.

A detailed flight plan was prepared before each departure. The particular flight route was formed on the basis of (in order of importance):

1) Land use activities within the protection areas,
2) Recent observations and reports of cow and cow and calf caribou movements,
3) Land use activities outside the protection areas, and
4) Historical patterns of movement.

Flights were conducted between 180 and 460 metres above ground level (AGL). During the first month of the monitoring program (15

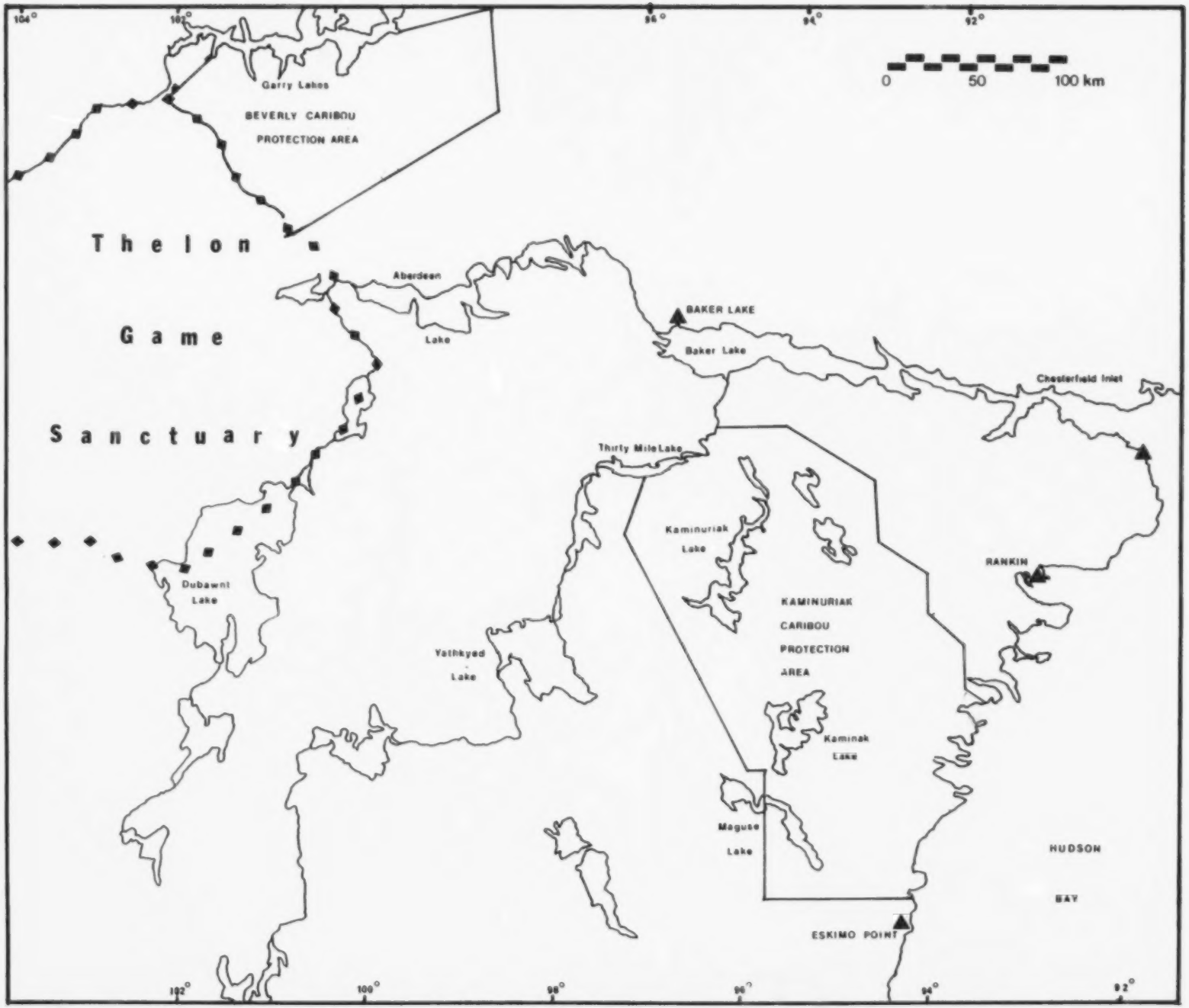

FIGURE 1. 1988 Caribou Protection Areas within the Keewatin

May - 15 June) when snow still covered the ground, flights were commonly conducted at 180 metres AGL. During the last half of the program, when caribou were assembling into large post-calving aggregations, flights were conducted at 460 metres AGL.

Standard observations included:

1) Visual estimates of caribou numbers, and when possible, composition (i.e., cows, calves, yearlings and/or bulls) and direction of movement,
2) Land use activities,
3) Caribou tracks, their heading and a rough estimate of the number of caribou which had passed through,
4) Changes in snow, ice and weather conditions during the flight and
5) Occurrences of wildlife species other than caribou.

A combination of Renewable Resources staff, INAC staff, HTA members, an assistant monitor and pilots assisted the monitor with additional observations while conducting the aerial surveys. A verbal report was given to the Rankin Inlet INAC District Manager within 24 hours of each flight and standard written reports followed as soon as possible (Appendix B). Individual flight reports and summary maps were filed with Renewable Resources in Eskimo Point and INAC in Rankin Inlet.

Data from the GNWT calving ground census of both the Beverly and Kaminuriak herds are included in this report. Collared caribou were tracked on an opportunistic basis during most caribou monitoring flights. Relocation of collared caribou complemented visual observations of caribou movements.

Flights totalled 34.6 hours - 4.6 hours during 1 flight over the Beverly herd (Figure 2) and 30.0 hours during 11 flights over the Kaminuriak herd (Figures 3 and 4).

Flight times were distributed as evenly as possible (weather aside) throughout the protection period, call-outs having priority (Table 1).

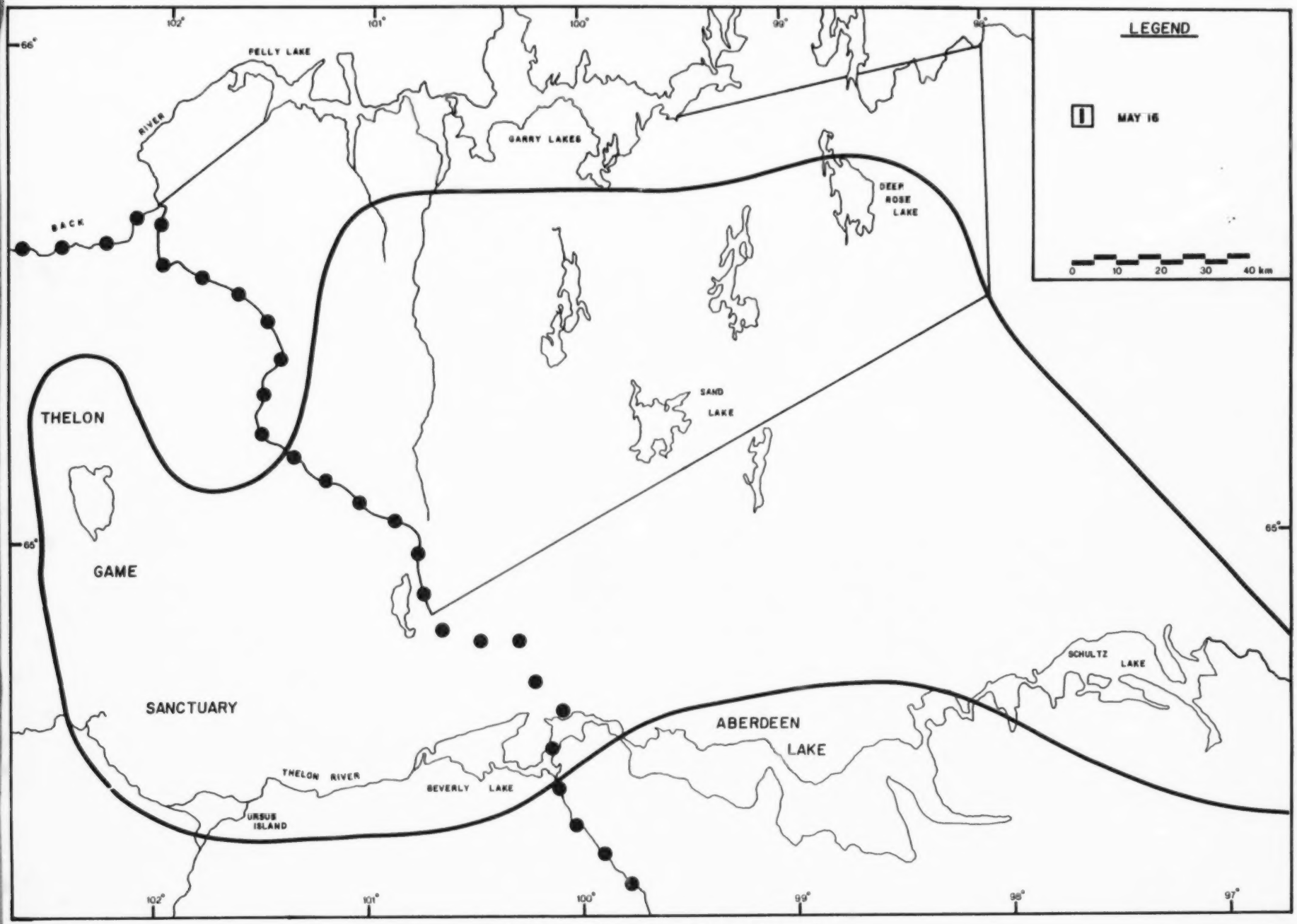

FIGURE 2. 1988 caribou monitoring flight line over the Beverly

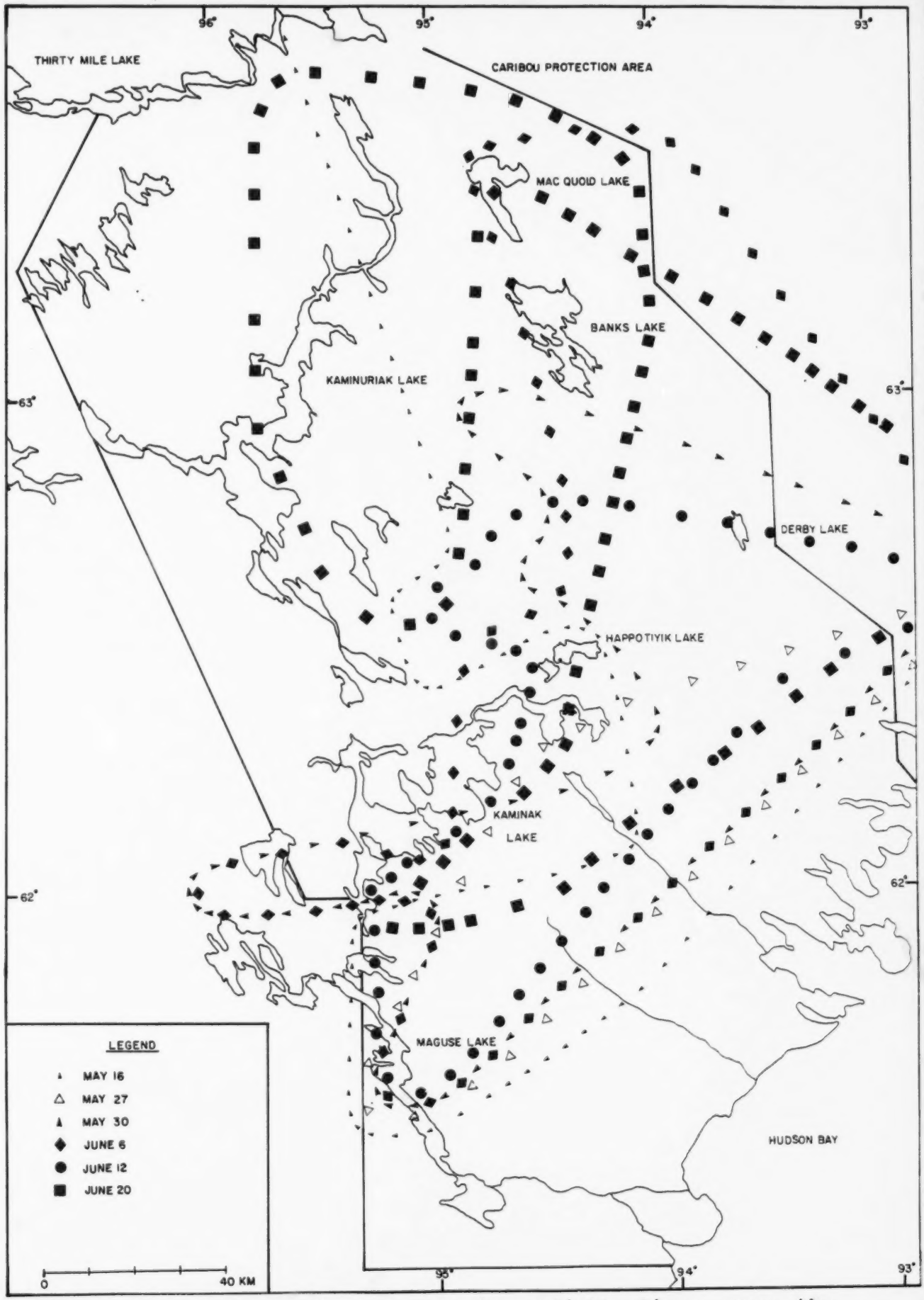

FIGURE 3. 1988 caribou monitoring flight lines over the Kaminuriak herd (continued on Figure 4).

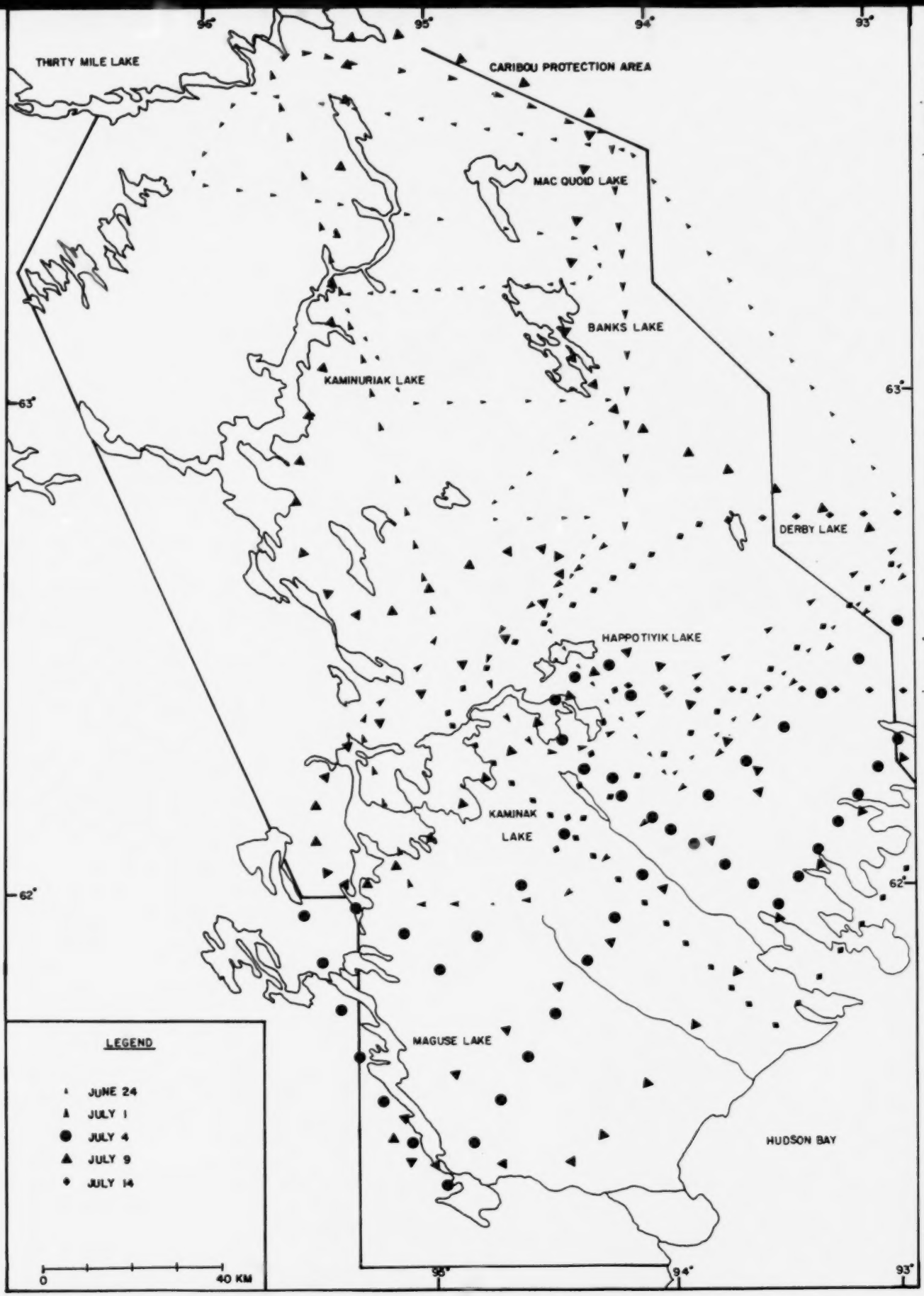

FIGURE 4. 1988 caribou monitoring flight lines over the Kaminuriak herd (continued from Figure 3).

Table 1. Schedule of caribou monitoring aerial surveys for 1988.

Date	Hours	Caribou Herd	Objective
16 May	7.6	Beverly and Kaminuriak	Primarily to determine the proximity of caribou to Borealis (N87D797), Sunmist (N87C690), NPR (N87C666), Placer Dome (N88N935), Utah (N88C908) and Urangescell- schaft (sites south of Shultz Lake) and secondarily to monitor the progress of Beverly and Kaminuriak caribou towards their calving grounds.
27 May	1.8	Kaminuriak	To determine the proximity of cow caribou to Borealis, Sunmist, NPR, Placer Dome, Utah and Dejours (N88C917).
30 May	2.7	Kaminuriak	Primarily to determine the proximity of cow caribou to Borealis, Sunmist, NPR, Placer Dome, Utah and Dejours and secondarily to monitor the progress of Kaminuriak caribou towards their calving grounds.
6 June	3.0	Kaminuriak	To determine the proximity of cow and calf caribou to Borealis, Sunmist, NPR, Placer Dome, Utah, Dejours and Comaplex (N88J944).
12 June	2.2	Kaminuriak	To determine the proximity of cow and calf caribou to Borealis, Sunmist, NPR, Placer Dome and Utah.
20 June	3.5	Kaminuriak	Primarily to determine the proximity of cow and calf caribou to Borealis, Geological Survey of Canada (N88N930), NPR, Placer Dome, Utah and Comaplex and secondarily to monitor post-calving caribou movements.

24 June	3.0	Kaminuriak	Primarily to determine the proximity of cow and calf caribou to Comaplex, NPR, Borealis and Geological Survey of Canada and secondarily to monitor post-calving caribou movements.
1 July	2.9	Kaminuriak	Primarily to determine the proximity of cow and calf caribou to Geological Survey of Canada, Borealis, Placer Dome, Sunmist, Utah, NPR and Comaplex and secondarily to monitor post-calving caribou movements.
4 July	2.4	Kaminuriak	To determine the proximity of cow and calf caribou to Geological Survey of Canada, Borealis, Placer Dome, Sunmist, Utah and Dejours.
9 July	3.7	Kaminuriak	Primarily to determine the proximity of cow and calf caribou to Geological Survey of Canada, INCO (N87C732), Borealis, Placer Dome, Sunmist, Utah, NPR and Comaplex and secondarily to monitor post-calving caribou movements.
14 July	1.8	Kaminuriak	To determine the proximity of cow and calf caribou to Geological Survey of Canada, INCO, Borealis and NPR.

RESULTS AND DISCUSSION

Beverly Caribou

Spring Migration

By 16 May, there were small (100 or less), isolated groups of cow and yearling caribou scattered throughout the protection area and Thelon Game Sanctuary. Caribou were migrating in a northeast direction. Therefore it appears caribou were once again passing through the Thelon Game Sanctuary on their way to their calving grounds (Figure 5). Caribou Monitors have recorded similar spring migration routes since 1978 (Darby 1978 and 1980, Cooper 1981, Clement 1982 and 1983, Bradley and Gates 1984, Bradley 1985, Duquette 1985, Liepins 1986, Ogilvie 1987).

Calving Grounds

At calving (12 June), GNWT Renewable Resources staff defined two cow caribou density zones; one high density zone and one medium density zone (Figure 5). The high density zone had 6 caribou per square kilometre and 92% of the females were breeding (Francis Jackson, pers. comm.). The low density zone had 3 caribou per

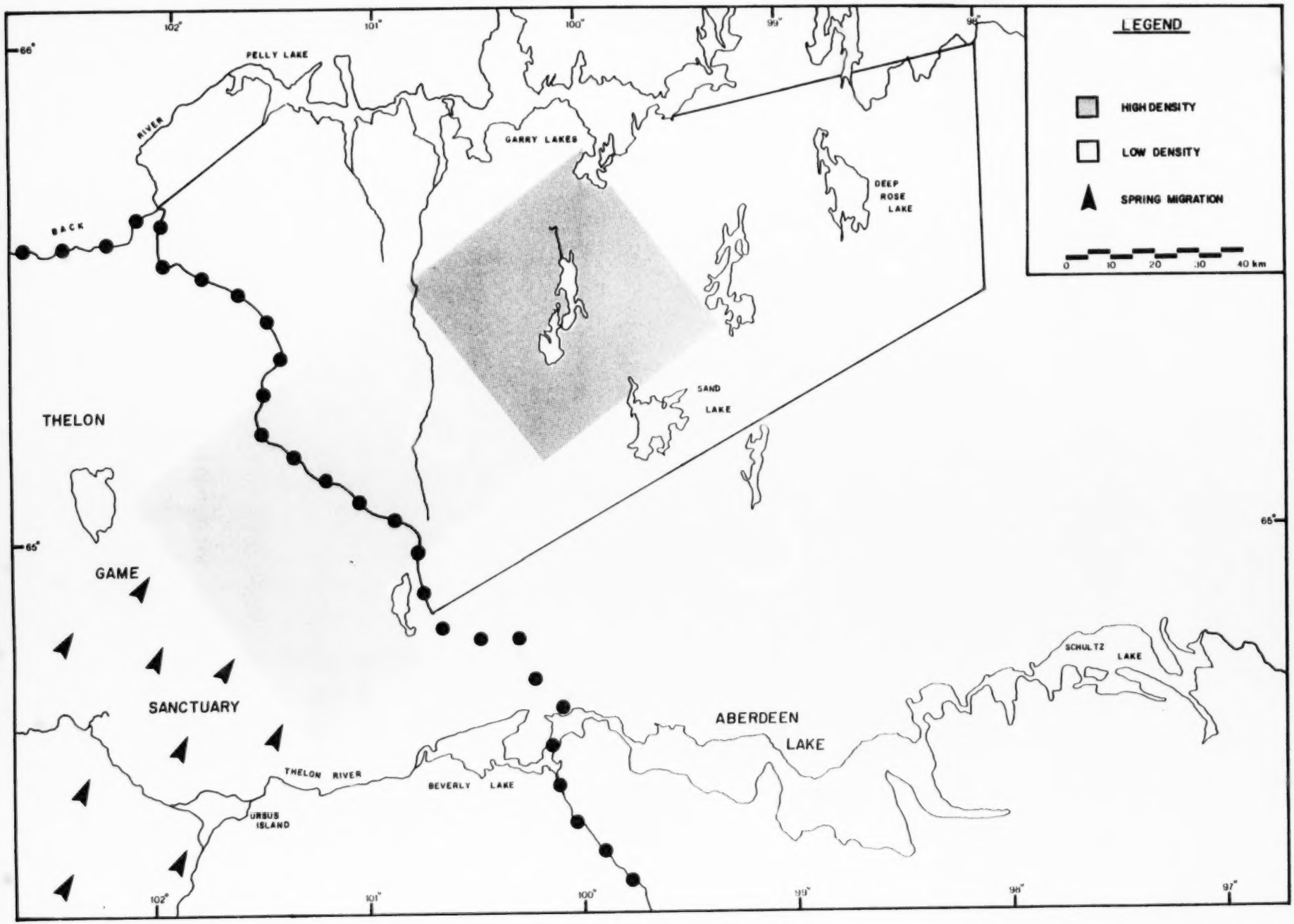

FIGURE 5. 1988 Beverly caribou spring migration and calving grounds.

square kilometre; that portion contained within the protection area had 59% breeding females whereas that portion contained within the Thelon Game Sanctuary had 39% breeding females (Francis Jackson, pers. comm.).

The location of the 1988 calving grounds is typical of calving rounds reported in previous years. Caribou calved within both the protection area and Thelon Game Sanctuary. The presence of calving caribou within the Thelon Game Sanctuary was also recorded in 1979, 1980, 1982 and 1987 (Darby 1980, Cooper 1981, Clement 1983, Ogilvie 1987, respectively).

Post-calving Movements

No data were collected on post-calving movements of Beverly caribou. Because of the large number of active land use sites around the Kaminuriak Caribou Protection Area, the remaining caribou monitoring flights were flown over Kaminuriak caribou. Historically, post-calving movements of Beverly caribou have been west and/or southwest into the Thelon Game Sanctuary (Darby 1979 and 1980, Cooper 1981, Clement 1982 and 1983, Bradley and Gates 1984, Bradley 1985, Duquette 1985, Liepins 1986, Ogilvie 1987).

Kaminuriak Caribou

Spring Migration

In the middle of March, Larry Gray and Ben Kovic (pers. comm.) reported large numbers of caribou (over 5,000) migrating north, past the community of Eskimo Point. Caribou were composed of cows, calves, yearlings and bulls.

In early May, Eskimo Point hunters reported seeing large numbers of caribou migrating north past Maguse Lake (Ben Kovic pers. comm.).

The first monitoring flight was conducted on 16 May. At this time, thousands of cow and yearling caribou were migrating north past Maguse Lake. Caribou were congregating south of Kaminak Lake and northwest of Happotiyik Lake.

A 27 May monitoring flight showed caribou still migrating north past Maguse Lake and congregating south of Kaminak Lake. The northern portion of the protection area was not investigated because of extensive ground fog.

By 30 May, caribou were still migrating north past Maguse Lake. Stationary caribou occupied a wide band extending from Kaminak Lake north to Banks Lake. One calf was observed during this monitoring flight.

On 6 June, migrating caribou had passed Maguse Lake. Cow and yearling caribou occupied a bimodal distribution stretching from Kaminak Lake north to Parker Lake; there was a high density of caribou at each end. Caribou in the north (near Parker Lake) were composed of a high percentage of cows whereas caribou in the south (near Kaminak Lake) were composed of a high percentage of yearlings (Larry Gray, pers. comm.). At this time, radio telemetry work indicated most cow caribou were within the protection area (Doug Heard, pers. comm.). A small number of calves were visible.

Spring migration of caribou onto their calving grounds occurred in two temporally separated stages: a northward movement in mid-March and another more extended movement during May. In both cases, migrating caribou passed Maguse Lake (Figure 6). Similar migration routes have been documented since the inception of the monitoring program in 1978 (Darby 1979 and 1980, Cooper 1981, Clement 1982 and 1983, Bradley and Gates 1984, Bradley 1985, Duquette 1985, Liepins 1986, Ogilvie 1987). In some years, Kaminuriak caribou have wintered north of the protection

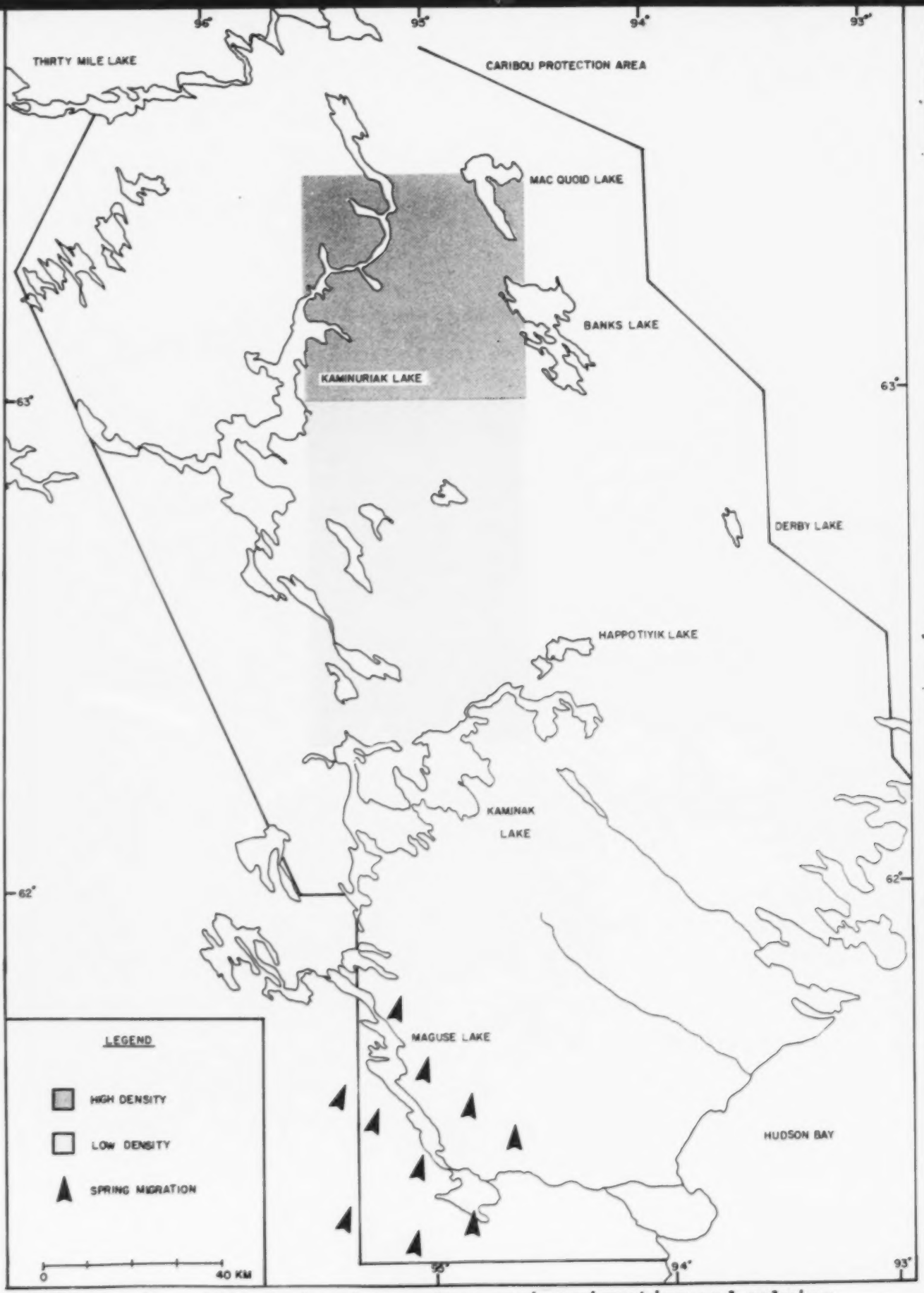

FIGURE 6. 1988 Kaminuriak caribou spring migration and calving grounds.

area (Darby 1978, Clement 1982 and 1983, Leipins 1986). There was no evidence that this occurred during the 1987/88 winter.

Calving Grounds

At calving (12 June), GNWT Renewable Resources calving ground survey staff defined a high and low density zone of cow caribou (Figure 6). Approximately 65% of the female caribou were breeding in the high density zone and 35% were breeding in the low density zone (Larry Gray, pers. comm.). At the same time, a monitoring flight discovered a small number of cow and calf caribou around Kaminak Lake.

Since 1978, the calving grounds have been in the general area of Kaminuriak Lake (Darby 1979 and 1980, Cooper 1981, Clement 1982, Bradley and Gates 1984, Bradley 1985, Duquette 1985, Liepins 1986) with the exception of 1982 when cows calved between Ferguson Lake and Kaminuriak Lake (Clement 1983) and 1987 when calving caribou were centrally located around Happotiyik Lake (Ogilvie 1987). The 1988 calving grounds is typical of those reported since 1978. Mychasiw (1984) reported that "calving grounds north of Banks Lake were used in each of the 11 years between 1963 and 1977 for which Kaminuriak calving distributions were documented".

Post-calving Movements

Opportunistic relocations of collared caribou were particularly helpful in defining post-calving caribou movements.

From the time of calving until late June, cow and calf caribou converged upon the area around MacQuoid Lake and Banks Lake (Figure 7).

A 20 June monitoring flight found bull and yearling caribou were joining the core area of cow and calf caribou around MacQuoid Lake and Banks Lake.

A 24 June monitoring flight discovered a second, smaller concentration of caribou east of Parker Lake. Caribou in this area were largely composed of bulls and non-breeding females.

On 26 June, Guy Sainte-Andre (pers. comm.) reported seeing approximately 1,000 bull and yearling caribou scattered between Tootyak Lake and longitude 94 degrees 30 minutes W. Presumably, these caribou had just arrived from the south.

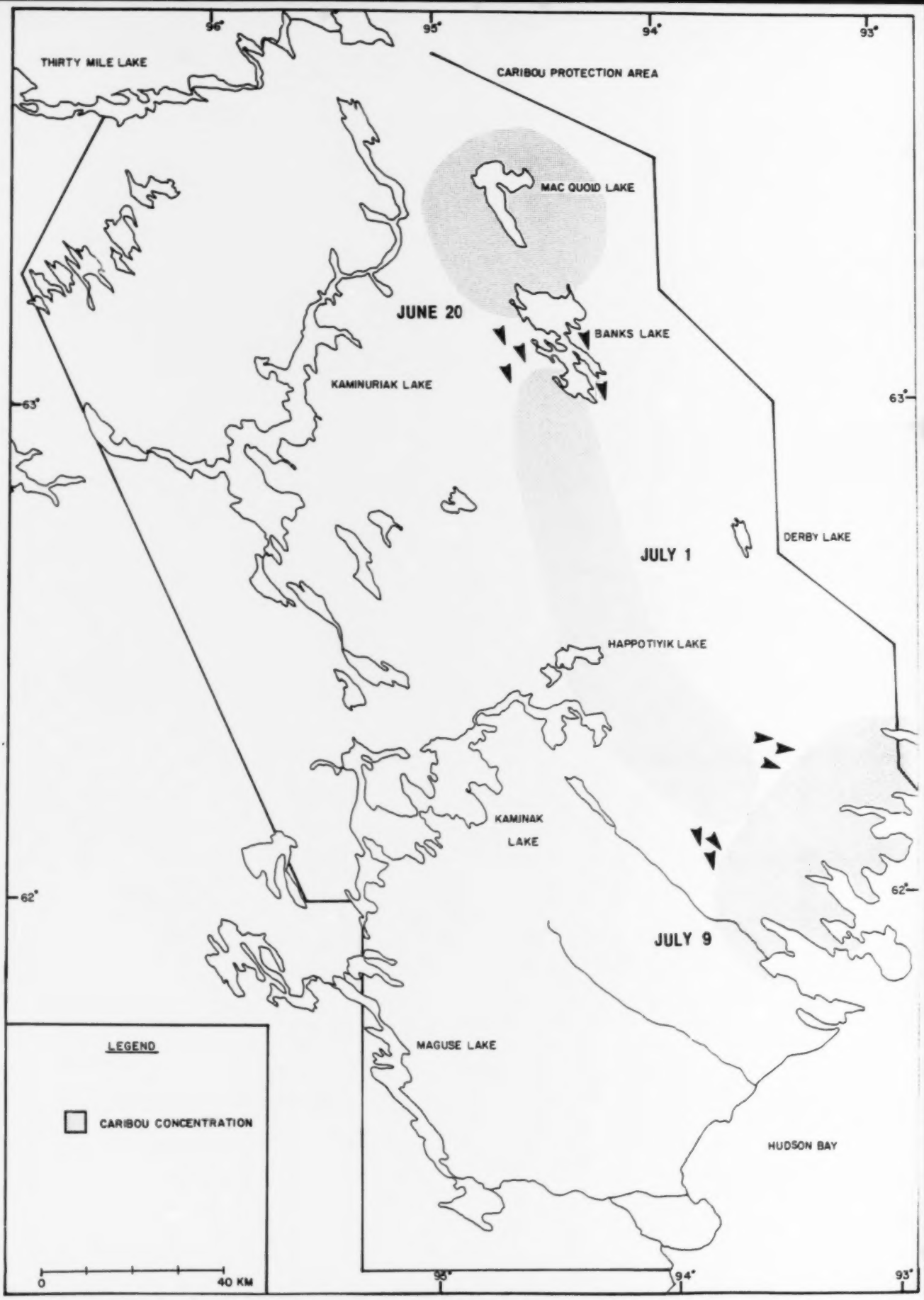

FIGURE 7. 1988 Kaminuriak caribou post-calving movements. 21

The first major post-calving movement was observed on 1 July. Both direct observations and relocations of collared caribou showed that thousands of cow and calf caribou were leaving the area around MacQuoid Lake and Banks Lake. Caribou were migrating south towards Happotiyik Lake and then southeast towards Maze Lake and Last Lake.

A 4 July monitoring flight found caribou still migrating from MacQuoid Lake and Banks Lake south to Happotiyik Lake and then southeast past Maze Lake and Last Lake. These migrating caribou were now congregating along the Hudson Bay coast between Nevill Bay and Mistake Bay.

By 9 July, most caribou had left the area of MacQuoid Lake and Banks Lake. Although some caribou remained around Happotiyik Lake, most caribou were now distributed along the coast from Pistol Bay south to Nevill Bay. Many thousands of caribou (minimum 20,000) now occupied the new 1988 addition to the Kaminuriak Caribou Protection Area. Out of a possible 17 collared caribou, 12 were relocated along the coast. Because of the relative low altitude, monitoring flights are conducted at (460 metres AGL), it is possible the 5 unlocated collars were along the coast but were outside the receiver's range. However, scattered isolated groups of caribou remained in the northern portion of the protected area and may have accounted for the missing collared caribou.

By 14 July, post-calving movements were divided into a northern and southern component. Thousands of caribou had turned inland as they migrated north and northwest towards Derby Lake and Happotiyik Lake. The smaller, southern movement occupied the coast around Dawson Inlet and Sandy Point.

On 16 July, Roger Toews (pers. comm.) reported caribou were arriving from the southeast and gathering along the south side of Baker Lake. Caribou continued to collect south of Baker Lake until the 20 July when they numbered approximately 10,000 (Roger Toews, pers. comm.). At this time caribou began to move west across the Kazan River between Baker Lake and the Kazan Falls.

By 18 July, the southern movement of caribou, previously beside Dawson Inlet and Sandy Point, had turned inland (Ben Kovic, pers. comm.).

On 20 July, in excess of 1,000 cow, calf, bull and yearling caribou migrated southwest past Rankin Inlet.

LAND USE ACTIVITY

Beverly Caribou Protection Area

There were no active land use sites within or around the Beverly Caribou Protection Area between 15 May and 15 July. During the single flight to the protection area, five land use sites south of Schultz Lake (land use permits N86J536, N88C933, N87C744, N88C925, N87C727) were investigated for caribou. No caribou were found in the vicinity of these sites.

Kaminuriak Caribou Protection Area

There were nine active land use sites within or around the Kaminuriak Caribou Protection Area between 15 May and 15 July (Figure 8).

Land Use Sites Within the Kaminuriak Caribou Protection Area

Borealis Exploration Ltd. continued to operate past the 15 May (Guy Sainte-Andre, pers. comm.). Several days later, in the absence of caribou, INAC issued a release. A recommendation for closure was given on 1 July when cow and calf caribou began to

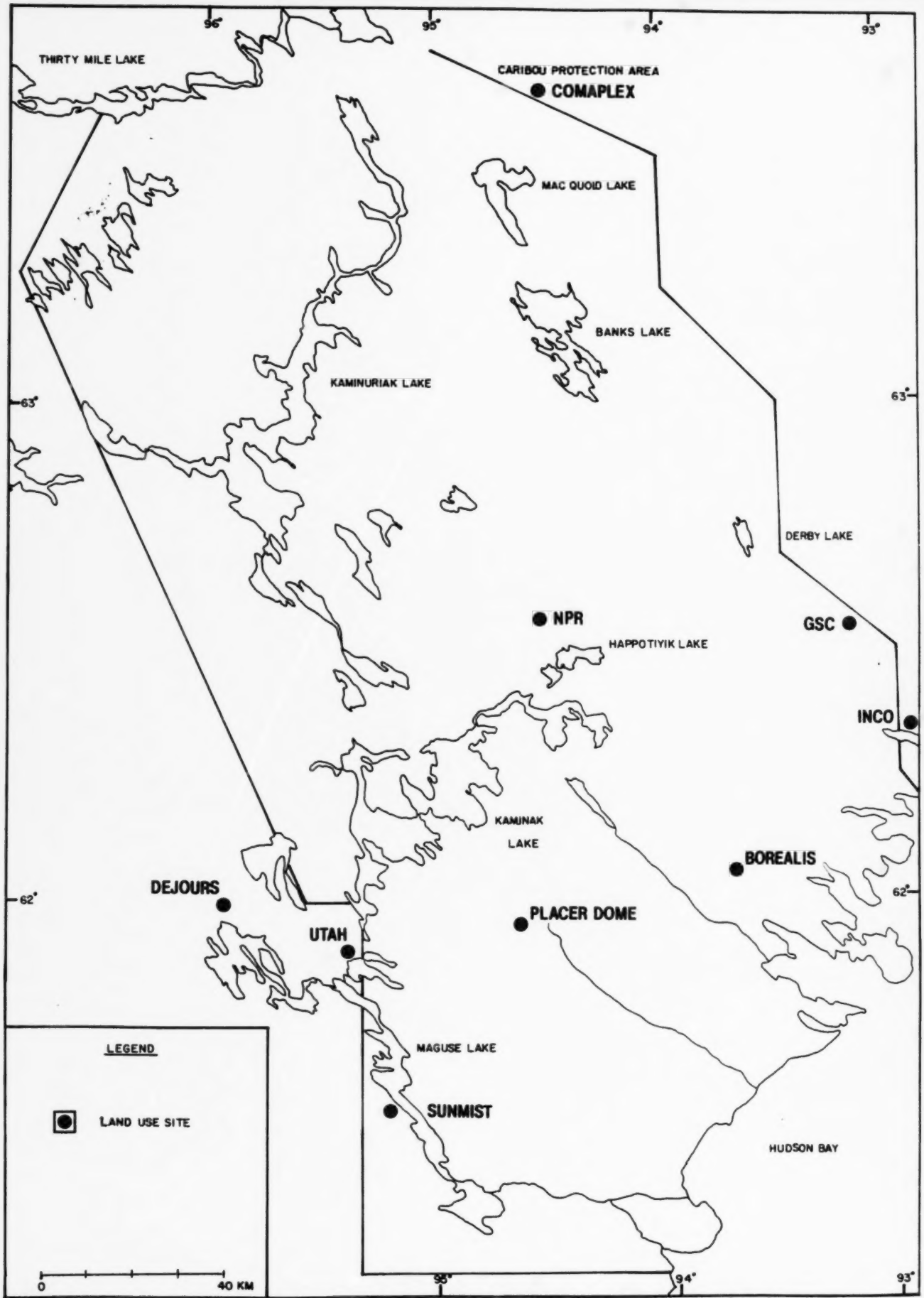

FIGURE 8. Active land use sites (15 May - 15 July) within or adjacent to the Kaminuriak Caribou Protection Area.

migrate past the land use site. More then 1,000 cow and calf caribou were observed within 15 kilometres of the site and two collared caribou, previously found northwest of Banks Lake, were found in the area. This movement represented the forefront of a much larger movement from the core concentration of cow and calf caribou which had resided between MacQuoid Lake and Banks Lake since 20 June. INAC allowed camp personnel to remain but restricted camp operations and aircraft flights to the site until 15 July.

A recommendation for closure of Sunmist Energy (N87C690) was given on 16 May when thousands of caribou were discovered migrating through the area. INAC allowed camp personnel to remain, but restricted camp operations and aircraft flights to the site. Caribou were no longer passing the site by 6 June. At this time a release was recommended. INAC granted a release on 7 June.

For most of the protection period, thousands of cow and later cow and calf caribou remained in the area of the NPR Mineral land use site (N87C666). On 16 May, the caribou monitor recommended a release not be granted to the camp. However, in April NPR Mineral had requested a release from the protection measures and INAC had agreed to allow the company to keep seven (7) people in camp during the protection period. In addition, the camp was permitted one

helicopter flight per week. By 8 July camp personnel were increased to twelve. In the absence of caribou, a release was recommended and granted on 14 July.

The Geological Survey of Canada had a camp (N88N930) with 4 personnel performing geological mapping by foot. INAC and GSC agreed to limit the number of flights to the camp from 10 July to 15 July when more than 1,000 caribou were within 5 kilometres of the camp.

The Placer Dome land use site (N88N935) was unoccupied for most of the protection period. On 9 June, the company requested permission to visit the site for two days in order to move construction materials from melting lake ice to the shoreline. INAC approved the request. On the 4 July Placer Dome requested a release. In the absence of caribou a release was granted the same day.

Land Use Sites Adjacent to the Kaminuriak Protection Area

INCO had a land use site (N87C732) located 9 kilometres outside the protection area. Closure of the camp was recommended on 9 July when more than 2,000 caribou were within 5 kilometres of the camp. INAC allowed personnel to remain in camp but ordered a

stop to drilling and helicopter flights. Restrictive orders were cancelled on 14 July when caribou moved away from the camp.

The Utah Mines Ltd. (N88C908) and Comaplex Mineral (N88J944) land use sites were located not more than 5 kilometres outside the protection area. The Dejours Mines (N88C917) land use site was located 20 kilometres outside the protection area. Although small numbers (less than 500) of caribou were periodically observed within 10 kilometres of each camp, larger numbers remained greater than 10 kilometres away. No closures were recommended.

Water Crossings

In 1988, designated water crossings in the summer range of Kaminuriak caribou were open by 24 June. No information is available on designated water crossings in the summer range of Beverly caribou.

Kaminuriak Caribou

Kaminuriak caribou were not observed using any of the designated water crossings. However, on 20 July Roger Toews (pers. com.) saw thousands of caribou crossing the Kazan River between Baker Lake and the Kazan Falls. It is possible caribou made a similar crossing in 1987 (Ogilvie 1987).

RECOMMENDATIONS

Beverly Caribou

No recommendations.

Kaminuriak Caribou

That portion of the Kazan River south of Baker Land and north of the Kazan Falls should be classified as a designated water crossing. In both 1987 (Ogilvie 1987) and 1988 (Roger Toews, pers. comm.), large numbers of caribou have been observed crossing this portion of the Kazan River.

ACKNOWLEDGEMENTS

Funding for this program was provided by Indian and Northern Affairs Canada. I would like to thank Keewatin Air pilots Ron Adolth, Victor Teply and Ulrich Dick for their cheerful assistance and many safe flights. Doug Heard and Larry Gray provided advice and field assistance. GNWT Beverly and Kaminuriak census project staff provided detailed data on caribou calving grounds. Renewable Resources Officers Ben Kovic, David Oolooyuk, Roger Toews and Dan Workman assisted with information on caribou movements, and Guy Sainte-Andre, Henry Kablalik and Cecilia Autut assisted with their cooperation and cheerful help.

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APPENDIX A. The 1988 Caribou Protection Measures

CARIBOU PROTECTION MEASURES
(KAMINURIAK AND BEVERLY HERDS)

1. (a) The permittee shall not, without approval, conduct any activity between May 15 and July 15 within the Caribou Protection Areas depicted on the map certified by the Engineer as the "Caribou Protection Map" annexed to this Land Use Permit. CARIBOU PROTECTION AREAS

(b) A Permittee may, upon approval by the Land Use Inspector, operate within the said Caribou Protection Areas beyond the May 15 deadline set out in 1(a), provided that when monitoring information indicates that caribou cows are approaching the area of operation, the Permittee will implement 1(c).

(c) On cessation of activities pursuant to 1(a) or 1(b), the Permittee will remove all personnel from the zone who are not required for the maintenance and protection of the camp facilities and equipment unless otherwise directed by the Land Use Inspector.

(d) The Permittee may commence or resume activities prior to July 15 within those parts of the Caribou Protection Areas released by the Land Use Inspector for the reason that caribou cows are not expected to use those parts for calving or post-calving (note 1).

2. (a) In the event that caribou cows calve outside of the Caribou Protection Areas, the Permittee shall suspend operations within the area(s) occupied by cows and/or cows and calves between May 15 and July 15.

(b) In the event that caribou cows and calves are present the Permittee shall suspend:

i) blasting
ii) overflights by aircraft at an altitude of less that 300 metres above ground level, and

APPENDIX A. (cont'd)

iii) the use of snowmobiles and ATV's (all-terrain vehicles) outside the immediate vicinity of the camp.

3. (a) During migration of Caribou, the Permittee shall not locate any operations so as to block or cause substantial diversion to migration. CARIBOU PROTECTION MIGRATION

(b) The Permittee shall cease activities that may interfere with migration, such as airborne geophysics surveys or movement of equipment, until the migrating caribou have passed.

4. (a) The Permittee shall not, between May 15 and September 1, construct any camp, cache any fuel or conduct any blasting within 10 km of any "Designated Crossing" as outlined on the map certified by the Engineer as the "Caribou Protection Map" and annexed to this Land Use Permit". CARIBOU CROSSING

(b) The Permittee shall not, between May 15 and September 1, conduct any diamond drilling operation within 5 km of any "Designated Crossing" as outlined on the map certified by the Engineer as the "Caribou Protection Map" and annexed to this Land Use Permit.

NOTE:

1. The Land Use Inspector's decision will be based on the existing caribou information.

2. Concentrations of caribou should be avoided by low level aircraft at all times.

APPENDIX B.

CARIBOU MONITORING FLIGHT REPORT

Date: Caribou Herd:
Flight Number:
Aircraft:
Observers:
Pilot:
Copilot:
Cloud Cover:
Visibility:
Temperature:
Wind:

LAND USE RATIONALE

SNOW COVER

ICE CONDITIONS

OBSERVATIONS

Numbers refer to observation points on the attached flight map.

Light tracks = less than 50 caribou travelled through the area.

Moderate tracks = 50 - 100 caribou

Heavy tracks = more than 100 caribou

Extensive tracks = many heavily used trails in the area.

1.
2.
etc.

LAND USE ACTIVITY

OTHER HUMAN ACTIVITIES

WATER CROSSING

SUMMARY

Flying time: